

**Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services**

STATEMENT OF BASIS

**Micro Manufacturing Unit (MMU)
Syngenta Crop Protection, Inc.
St. Gabriel, Iberville Parish, Louisiana
Agency Interest Number: 2367
Activity Number: PER19980004
Draft Permit 2931-V0**

I. APPLICANT:

Company:

Syngenta Crop Protection, Inc.
P. O. Box 11
St. Gabriel, LA 70776

Facility:

Micro Manufacturing Unit (MMU)
3905 Hwy 75
St. Gabriel, LA 70776
Approximate UTM coordinates are 682.853 kilometers East and 3347.050
kilometers North, Zone 15
SIC Code: 2879

II. FACILITY AND CURRENT PERMIT STATUS:

The Syngenta St. Gabriel Plant manufactures and formulates pesticides and specialty chemicals. Specific processes include: 1) manufacture, formulation, and packaging of s-triazine herbicides, 2) manufacture of hydrogen cyanide, a raw material, 3) manufacture, formulation, and packaging activities for various other pesticides, and specialty chemicals, and 4) supportive activities for the above which include effluent treatment systems, maintenance, utilities, analytical and quality control. Additionally, hazardous and non-hazardous solid waste streams are incinerated in the St. Gabriel Plant multi-purpose rotary kiln incinerator.

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The facility submitted timely applications for initial Part 70 permits and continues to operate pursuant to the "application shield" provided in the program.

In addition, the facility has one state permit that will remain effective until replaced by a Part 70 permit. This is:

Permit #	Units or Sources	Date Issued
1280-00029-08	Micro-Manufacturing Unit (MMU)	02/20/2003

Several Part 70 permits addressing portions of the facility have already been issued. These include:

Permit #	Units or Sources	Date Issued
2610-V1	Utilities Area	01/15/2002
2807-V0	General Permit (EO Incinerator Feed Tank)	06/19/2002
2718-V0	Environmental Operations (EO)	01/13/2003
2842-V1	Multi-Product Facility	11/30/2003
2871-V0	T-1013 Storage Tank	11/05/2003
2897-V0	Packaging Unit	02/25/2005
2904-V0	Herbicide Production Unit	08/11/2005
2898-V0	Hydrogen Cyanide Unit	11/28/2005

III. PROPOSED PERMIT / PROJECT INFORMATION:

Proposed Permit

A permit application and Emission Inventory Questionnaire was submitted by Syngenta Crop Protection - St. Gabriel Plant in September 1996 requesting a Part 70 operating permit. Also a revised application and EIQ dated February 28, 2002 and December 8, 2005 were submitted.

Project Description

The proposed modifications are as follows:

1. Consolidate all permitting activities;
2. Delete Emission Point Z3-83, HCl Storage Tank Scrubber (T-350A/350B); and
3. Delete Emission Point Z1-93, Emergency Scrubber.

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Permitted Air Emissions

Estimated emissions in tons per year are as follows:

<u>Pollutant</u>	<u>Before</u>	<u>After</u>	<u>Change</u>
PM ₁₀	9.05	4.07	- 4.98
SO ₂	0.01	4.67	+ 4.66
NO _x	24.79	16.98	- 7.81
CO	0.78	5.75	+ 4.67
VOC	22.27	25.58	+ 3.31

VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

<u>Pollutant</u>	<u>TPY</u>	<u>Pollutant</u>	<u>TPY</u>
Acetaldehyde	0.0005	Acrolein	0.0005
Benzene	0.005	Cumene	0.05
Formaldehyde	0.04	n-Hexane	0.06
Naphthalene	0.28	Toluene	12.95
Toluene 2,4 Diisocyanate (TDI)	Neg	Polynuclear Aromatic Hydrocarbon (PAH)	0.001
Trichloroethylene	0.0004	Xylene	0.09
Total	13.48		

Other VOC (TPY):

Acetic Acid	0.21
Methylenediphenyl Diisocyanate*	5.54

*TAP under the supplemental list

Non- VOC TAPs (TPY):

Ammonia	0.30
Copper Compounds	0.001
Hydrogen Acid	0.0004
Hydrogen Cyanide	0.05
Total	0.35

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Regulatory Analysis

This permit was reviewed for compliance with 40 CFR 70, the Louisiana Air Quality Regulations, New Source Performance Standards (NSPS), and NESHAP. Prevention of Significant Deterioration does not apply.

This facility is a major source of toxic air pollutants (TAPs) pursuant to LAC 33:III.Chapter 51.

Louisiana Air Quality Regulations and NSPS

The applicability of the appropriate regulations is straightforward and provided in the Facility Specific Requirements Section of the draft permit, or Section X of the Air Permit Briefing Sheet. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are provided in the Facility Specific Requirements Section of the draft permit, or explained in Section XI of the Air Permit Briefing Sheet.

Prevention of Significant Deterioration Applicability

The Micro Manufacturing Unit is an existing facility. Therefore, the PSD regulations do not apply.

MACT Requirements

The MMU is subject to 40 CFR 63, Subpart FFFFF – Miscellaneous Organic chemical Manufacturing.

Air Modeling Analysis

Air Modeling Analysis is not required.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to Section VIII of the draft Part 70 permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to Section IX of the draft Part 70 permit.

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IV. Permit Shields

A permit shield was not requested.

V. Periodic Monitoring

N/A

VI. Applicability and Exemptions of Selected Subject Items		
ID No:	Requirement	Notes
	See Tables X and XI of Air Briefing Sheet	

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	See Tables X and XI of Air Briefing Sheet	

VII. Streamlined Requirements			
Unit or Plant Site	Programs Being Streamlined	Stream Applicability	Overall Most Stringent Program
N/A			

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Glossary

Best Available Control Technologies (BACT) - An emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under this part which would be emitted from any proposed major stationary source or major modification which the administrative authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.

Carbon Monoxide (CO) - A colorless, odorless gas which is an oxide of carbon.

Grandfathered Status- Those facilities that were under actual construction or operation as of June 19, 1969, the signature date of the original Clean Air Act. These facilities are not required to obtain a permit. Facilities that are subject to Part 70 (Title V) requirements lose grandfathered status and must apply for a permit.

Maximum Achievable Control Technology (MACT) - The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

New Source Review (NSR) - A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nitrogen Oxides (NO_x) - Compounds whose molecules consists of nitrogen and oxygen.

National Emission Standards for Hazardous Air Pollutants (NESHAP) - Toxic air emission standards for specific types of facilities, as outlined in 40 CFR Parts 61 through 63.

Nonattainment New Source Review (NNSR) - A New Source Review permitting program for major sources in geographic areas that do not meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. Nonattainment NSR is designed to ensure that emissions associated with new or modified sources will be regulated with the goal of improving ambient air quality.

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Organic Compound - Any compound of carbon and another element. Examples: Methane (CH₄), Ethane (C₂H₆), Carbon Disulfide (CS₂)

PAI Pesticide Active Ingredient MACT – any facility that is subject to 40 CFR 63 Subpart MMM

Part 70 Operating Permit- Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM₁₀- Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) - The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO₂) – An oxide of sulphur.

Title V permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) - Any organic compound which participates in atmospheric photochemical reactions; that is, any organic compound other than those which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.